SKF DryLube Bearings need no re-lubrication for loop guide rolls in bar mills

Benefits

- Increased system reliability
  - Extended service life
  - Less unplanned downtime
- Reduced maintenance
  - Virtually maintenance-free
  - No need for re-lubrication
- Reduced environmental impact
  - No grease consumption
  - No lubricant leakage
  - Reduced or no need for cooling
- Improved safety
  - Reduced risk of fires from excess grease
  - Elimination of slippery work surfaces caused by grease
  - Reduced total operating costs
  - Reduced risk of bar surface damage
  - Reduced lubricant and energy costs
  - Reduced cost for process water treatment

Typical applications

- Loop guide rolls in bar mills
- Cooling and roll out tables in casters of all types
- Reheating furnace rolls
- Roller tables in hot rolling mills
- Rolls in bloom and billet casters
- Sinter machine wheels

Engineered graphite solution helps drive productivity and profitability

Exposed to operating conditions that make adequate lubrication difficult, loop guide roll bearings have short service lives. Product surface temperatures up to 900 °C and variable speeds demand a centralized lubrication system that applies grease frequently. Often, an outside water-cooling system is also required.

Both systems increase energy and maintenance costs and add system complexity. Compromised or failed bearings can cause product surface defects, reducing productivity. Excess grease accumulating outside the rolls is a substantial fire hazard.

To mitigate some of these risks, many rod and bar mills install oil-air lubrication systems. Yet, these systems come with problems of their own, including air quality issues and higher investment, maintenance, energy and operating costs.

The solution: SKF DryLube Bearings

Featuring an engineered graphite mixture that fills the empty space inside the bearing, SKF DryLube Bearings eliminate re-lubrication requirements. Almost any SKF bearing type can be supplied as an SKF DryLube Bearing, providing very low and constant friction, and an extremely high temperature limit of 350 °C.

By moving away from grease lubrication – and the associated operating costs and productivity limitations that come with it – SKF DryLube Bearings can help rod and bar mills boost reliability and safety while reducing their maintenance costs and environmental impact.

For more information about SKF products and solutions for the metals industry, contact your SKF Authorized Distributor.

Increase the return on your maintenance investment with SKF

The whole idea behind the SKF 360° Solution is to help you get more out of your plant machinery and equipment investment. This may mean lowering your maintenance costs, raising your productivity, or both! Here's an example of the SKF 360° Solution at work in the metals industry.

SKF DryLube Bearings help mill increase loop guide roll service life dramatically

The challenge

A rod and bar mill was suffering from frequent bearing failures in their loop guide rolls. On average, the bearing service life was only one month, resulting in frequent product surface defects and lost productivity, as well as intensive, costly maintenance efforts.

Worse yet, the intensive maintenance would often lead to shaft and housing damage during mounting and disassembly operations. The frequent rebuilds were also limiting performance of the oil-air lubrication system. Looking to stop this recurring cycle and reduce unplanned downtime and related costs, the company looked to SKF.

The SKF solution

SKF engineers visited the site to assess the situation and present the mill with a range of high-temperature bearing solutions. The mill agreed to run a test with SKF DryLube Bearings.

The result

SKF DryLube Bearings boosted loop guide roll service life dramatically. Rolls that were previously failing monthly are now lasting over two years.

Return on Investment (ROI) summary*

Investment in the SKF solution per guide roll line	**$16 900**
Average mean time between repair before SKF solution	**1 month**
Average mean time between repair with SKF solution	**24 months**
Annual savings per line	**$300 000**
ROI after 12 months	**1 675%**

*All numbers are rounded off and based on customer estimates. Your particular cost savings may vary.

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